

1 ABSTRACT OF THE DISCLOSURE

2 Methods of forming capacitors and resultant capacitor structures
3 are described. In one embodiment, a capacitor storage node layer is
4 formed over a substrate and has an uppermost rim defining an opening
5 into an interior volume. At least a portion of the rim is capped by
6 forming a material which is different from the capacitor storage node
7 layer over the rim portion. After the rim is capped, a capacitor
8 dielectric region and a cell electrode layer are formed over the storage
9 node layer. In another embodiment, a capacitor storage node layer is
10 formed within a container which is received within an insulative
11 material. A capacitor storage node layer is formed within the container
12 and has an outer surface. A layer of material is formed within less
13 than the entire capacitor container and covers less than the entire
14 capacitor storage node layer outer surface. The layer of material
15 comprises a material which is different from the insulative material
16 within which the capacitor container is formed. After the capacitor
17 storage node layer and the layer of material are formed, a capacitor
18 dielectric functioning region is formed which is discrete from the layer
19 of material and operably proximate at least a portion of the capacitor
20 storage node layer outer surface. A cell electrode layer is formed over
21 the dielectric functioning region and the layer of material.

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